

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: March 13, 1997  
Date Received: March 6, 1997  
Project: Metro Self Monitor, PO #M56460  
Date Samples Extracted: March 7, 1997  
Date Extracts Analyzed: March 11, 1997

**RESULTS FROM THE ANALYSIS OF THE WATER SAMPLE  
FOR CHROMIUM, COPPER, NICKEL, AND ZINC  
USING METHOD 6010**

**Samples Processed Using Method 3005A**  
Results Reported as mg/L (ppm)

<u>Sample ID</u>	<u>Chromium</u>	<u>Copper</u>	<u>Nickel</u>	<u>Zinc</u>
M56460	0.58	0.51	0.58	<0.05
Method Blank	<0.05	<0.05	<0.05	<0.05

**FRIEDMAN & BRUYA, INC.**

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Date of Report: March 13, 1997

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**QUALITY ASSURANCE RESULTS  
FOR TOTAL METALS BY  
INDUCTIVELY COUPLED PLASMA (ICP)  
(METHOD 6010)**

Laboratory Code: 76412 (Duplicate)

<u>Analyte:</u>	<u>Reporting Units</u>	<u>Sample Result</u>	<u>Duplicate Result</u>	<u>Relative Percent Difference</u>	<u>Acceptance Criteria</u>
Chromium	mg/L (ppm)	0.58	0.58	0	0-20
Copper	mg/L (ppm)	0.51	0.51	0	0-20
Nickel	mg/L (ppm)	0.58	0.58	0	0-20
Zinc	mg/L (ppm)	<0.05	<0.05	nm	0-20

Laboratory Code: 76412 (Matrix Spike)

<u>Analyte:</u>	<u>Reporting Units</u>	<u>Spike Level</u>	<u>Sample Result</u>	<u>% Recovery</u>		<u>Acceptance Criteria</u>	<u>Relative Percent Difference</u>
				<u>MS</u>	<u>MSD</u>		
Chromium	mg/L (ppm)	5	0.58	96	97	80-120	1
Copper	mg/L (ppm)	5	0.51	90	91	80-120	1
Nickel	mg/L (ppm)	10	0.58	95	95	80-120	0
Zinc	mg/L (ppm)	5	<0.05	97	94	80-120	3

Laboratory Code: Spike Blank

<u>Analyte:</u>	<u>Reporting Units</u>	<u>Spike Level</u>	<u>% Recovery</u>		<u>Acceptance Criteria</u>	<u>Relative Percent Difference</u>
			<u>MS</u>	<u>MSD</u>		
Chromium	mg/L (ppm)	5	100	98	80-120	2
Copper	mg/L (ppm)	5	95	93	80-120	2
Nickel	mg/L (ppm)	10	101	99	80-120	2
Zinc	mg/L (ppm)	5	101	99	80-120	2

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

KNTJ AT  
3-6-97  
1:00 PM

Send Report To: Alaska Copper Works Contact Genald J. Thompson  
Company Alaska Copper Works  
Address 6-28 Anderson ST  
City, State, Zip Seattle WA 98134  
Phone # (206) 382-8379 Date 3/6/77

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.  
Beth M. Albertson, M.S.  
Bradley T. Benson  
Kelley D. Wilt

3012 16th Avenue West  
Seattle, WA 98119-2029  
TEL: (206) 285-8282  
FAX: (206) 283-5044

March 13, 1997

INVOICE # 97ACU0313-1  
DUPLICATE COPY

Accounts Payable  
Alaskan Copper Works  
628 South Hanford St.  
Seattle, WA 98134

RE: Project Metro Self Monitor, PO #M56460: Results of testing requested by  
Gerry Thompson, Project Manager for material submitted on March 6, 1997.

1 water sample analyzed for  
Chromium, Copper, Nickel, and Zinc  
using Method 6010 @ \$65 per sample

\$ 65.00

Amount Due .....

\$ 65.00

FEDERAL TAX ID # (b) (6)



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FAX: (206) 283-5044

March 13, 1997

Gerry Thompson, Project Manager  
Alaskan Copper Works  
628 South Hanford St.  
Seattle, WA 98134

Dear Mr. Thompson:

Included are the results from the testing of material submitted on March 6, 1997 from your Metro Self Monitor, PO #M56460 project.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Kurt Johnson  
Chemist

keh  
Enclosures  
ACU0313R.DOC